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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/765,226	01/18/2001	Baining Liu	101215-55	7377
7590 01/15/2004			EXAMINER	
Bruce S. Londa			NGUYEN, TUAN N	
NORRIS, McLAUGHLIN & MARCUS, P.A 30th Floor			ART UNIT	PAPER NUMBER
220 East 42nd Street			2828	
New York, NY	10017		DATE MAIL ED: 01/15/2004	

Please find below and/or attached an Office communication concerning this application or proceeding.

è		Application No.	Applicant(s)
		09/765,226	LIU ET AL.
	Office Action Summary	Examiner	Art Unit
		Tuan N Nguyen	2828
Daried fo	The MAILING DATE of this communication app	ears on the cover sheet with t	he correspondence address
Period fo		/ IC CET TO EVOIDE 2 MON	ITU(S) EDOM
THE - Exte after - If the - If NO - Failt - Any	ORTENED STATUTORY PERIOD FOR REPLY MAILING DATE OF THIS COMMUNICATION. Insions of time may be available under the provisions of 37 CFR 1.13 SIX (6) MONTHS from the mailing date of this communication. It is period for reply specified above is less than thirty (30) days, a reply of period for reply is specified above, the maximum statutory period variety or reply within the set or extended period for reply will, by statute, reply received by the Office later than three months after the mailing ed patent term adjustment. See 37 CFR 1.704(b).	36(a). In no event, however, may a reply within the statutory minimum of thirty (30 will apply and will expire SIX (6) MONTHS, cause the application to become ABANE	be timely filed)) days will be considered timely. from the mailing date of this communication. DONED (35 U.S.C. § 133).
	Responsive to communication(s) filed on Augu	st 22, 2003.	
•	<u> </u>	action is non-final.	
<i>,</i> —	Since this application is in condition for allowar closed in accordance with the practice under E	nce except for formal matters	
Disposit	ion of Claims		
4)⊠	Claim(s) 3,4,6,7 and 9-12 is/are pending in the	application.	
	4a) Of the above claim(s) is/are withdraw	vn from consideration.	
5)	Claim(s) is/are allowed.		0 . 0 -
6)⊠	Claim(s) 3,4,6,7 and 9-12 is/are rejected.		Paul
7)	Claim(s) is/are objected to.		PAUL IP
8)□	Claim(s) are subject to restriction and/or	r election requirement.	PERVISORY PATENT EXAMINER
Applicat	ion Papers		ECHNOLOGY CENTER 2800
9)[The specification is objected to by the Examine	r.	
10)⊠	The drawing(s) filed on 22 August 2003 is/are:	a) accepted or b) ⊠objec	ted to by the Examiner.
	Applicant may not request that any objection to the	drawing(s) be held in abeyance.	See 37 CFR 1.85(a).
	Replacement drawing sheet(s) including the correct		
11)	The oath or declaration is objected to by the Ex	aminer. Note the attached Of	ffice Action or form PTO-152.
Priority (under 35 U.S.C. §§ 119 and 120		
* (13)	Acknowledgment is made of a claim for foreign All b) Some * c) None of: 1. Certified copies of the priority documents Copies of the certified copies of the priority documents Copies of the certified copies of the priority documents Acknowledgment is made of a claim for domestic ince a specific reference was included in the first CFR 1.78. Acknowledgment is made of a claim for domestic the translation of the foreign language processes and the company of the foreign language processes are company of the foreign language processes and the company of the foreign language processes and the company of the foreign language processes are company of the foreign language processes and the company of the foreign language processes are company of the foreign language processes and the company of the foreign language processes are company of t	s have been received. s have been received in Applicity documents have been received in Application (PCT Rule 17.2(a)). of the certified copies not receive priority under 35 U.S.C. § 1 st sentence of the specification visional application has been a priority under 35 U.S.C. §§	ication No beived in this National Stage eived. 19(e) (to a provisional application) or in an Application Data Sheet. received. 120 and/or 121 since a specific
Attachmer	• •		
2) 🛛 Notic	ce of References Cited (PTO-892) ce of Draftsperson's Patent Drawing Review (PTO-948) mation Disclosure Statement(s) (PTO-1449) Paper No(s) _	5) Notice of Inform	mary (PTO-413) Paper No(s) nal Patent Application (PTO-152)

Response to Amendment

1. In responding to applicant's amendment filed August 20, 2003, claims 3,4,6,7,9,11 claim 12 has been added, and claims 1,2,5,8 have been canceled. Claims 3, 4, 6, 7, 9-12 are pending.

2. Applicant's arguments with respect to claims 3, 4, 6, 7, 9-12 have been considered but are most in view of new ground of rejection.

Drawings

3. New corrected drawings are required in this application because it is not acceptable to the draftsperson, see the attached Notice of Draftsperson drawing review

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

5. Claims 3, 4, 9, 11, 12 are rejected under 35 U.S.C. 102(a) as being anticipated by Gries et al. (US 6633595) or Zanger et al. (US 6317449), or Pelouch et al. (US 5383198).

With respect to claims 3, 4, and 12 Gries '595 discloses and shows in figure 1 " A frequency-converter laser apparatus comprising an optical pumping source for producing optical pumping radiation (Fig 1: Multimode laser); a unidirectional ring cavity comprising a frequency conversion crystal, a prism and mirror arrangement, wherein the frequency conversion crystal is positioned such that the radiation produced by the optical pumping source enters in a

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predetermined direction, and wherein the frequency conversion crystal is a symmetrical Brewster-angled crystal (Fig 1: Prism, mirror 1 & 2, and optically nonlinear crystal "Brewster-angled"). Pelouch et al. '198 also shows a unidirectional ring cavity comprising a Brewster-angle crystal, prism, and mirrors arrangement, such that the radiation produced by the optical pumping source enters in a predetermined direction (Fig 1: 18-30). Zanger et al. ' 449 also shows a similar structural (Fig 4). Since claims 3, and 12 recites the same or identical limitations it is inherent to use patents ('595), or '198, or ('449) to recite the method of producing

With respect to claims 9 and 11, Gries '595 disclosed the crystal made from BBO "ABSTRACT; Col 1: 60-61), and the prism connected to a piezoelectric element (Col 2: 15-20).

Claim Rejections - 35 USC § 103

frequency-converted laser radiation, product by process.

- 6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

- 1. Determining the scope and contents of the prior art.
- 2. Ascertaining the differences between the prior art and the claims at issue.
- 3. Resolving the level of ordinary skill in the pertinent art.
- 4. Considering objective evidence present in the application indicating obviousness or non-obviousness.

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7. Claims 6,7, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gries

et al. (US 6633595) or Zanger et al. (US 6317449), or Pelouch et al. (US 5383198).

With respect to claims 6, 7, 10 Gries '595 discloses the above, and further shows the

coupling optic disposed between pump source and ring cavity. The claims further require a stage

amplifier and an external resonant cavity. Even though Gries '595 did not explicitly disclosed a

stage amplifier, however the ABSTRACT disclosed the "arrangement for resonant frequency

doubling..." suggest the stage amplifier is inherently built in, and the ring cavity is an external

resonant cavity, it is within one skill in the art.

Conclusion

8. The prior art made of record and relied upon is considered pertinent to applicant's

discloses.

Stappaerts (US 5341236), Ellingson et al. (US 5406408), Maker (US 5357537), Kung

(US 6005878).

9. Applicant's amendment necessitated the new ground of rejection presented in this office

action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP 706.07. Applicant is

reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

Communication Information

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Tuan N Nguyen whose telephone number is (571) 272 -1948.

The examiner can normally be reached on M-F: 7:30 - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Paul Ip can be reached on (571) 272-1941. The fax phone numbers for the

organization where this application or proceeding is assigned are (703) 872-9318 for regular

communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is (703) 308-1782.

Tuan N. Nguyen Tuan Ngys

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